

# **The Usability of School Library Websites: A Nationwide Study**

Anthony S. Chow, Ph.D.  
Assistant Professor  
SOE Director of Online Learning  
Department of Library and Information Studies  
The University of North Carolina at Greensboro  
[aschow@uncg.edu](mailto:aschow@uncg.edu)

Amy Figley, MLIS  
The University of North Carolina at Greensboro

Jessica Sherard, MLIS  
The University of North Carolina at Greensboro

## **The usability of school library websites: A nationwide study**

This study embraces the conference theme of *Learning in the Age of Globalization* by exploring how basic cognitive information seeking behaviors and needs differ between adults and K-12 youth on the Web. Emerging research suggests significant differences between how adults and youth seek information and in their preferences in seeking information in online digital environments (Blowers & Bryan, 2004; Large & Beheshti, 2005; Cooper, 2005; Nielsen, 2005; Buckleitner, 2008; Cai & Zhao, 2010; Considine, Horton, & Moorman, 2009). Given the growing body of knowledge about these differences, our study sought to explore several questions – What does a typical school library website look like in terms of design and content? How do they compare to research-based best practices? And, were they designed more for youth or adults and how usable were they?

## **Literature Review**

These information seeking differences between adult and youth information seekers are largely due to affective and cognitive factors and widely variant goals. Adults are generally more confident, able to process and sift through large amounts of less concrete information, and, in general, are goal-oriented (Nielsen, 2005). Youth, on the other hand, are less confident, need more assurance and support, are less able to process large amounts of abstract information, and are more exploratory than goal-oriented when seeking information (Cai & Zhao, 2010; Large, Beheshti, & Rahman, 2002; Milligan & Murdock, 1996).

Youth, in fact, can be broken down into four discrete information seeking groups defined by their ability to read and Piaget's cognitive developmental stages: 1) *Pre-readers* (3-5 years old) are in Piaget's sensory motor stage; 2) *Beginning readers* (5-8 years old) are in Piaget's pre-operational stage and in preschool or early elementary school; this phase is characterized by "ego-centrism" where children are self-centered and expect the world to operate through their world view and perspective (Cooper, 2005); 3) *Intermediate readers* (9-12 years old) are in Piaget's concrete operational stage; these pre-teens understand the world through concrete objects and trial-and-error learning (Huitt & Hummel, 2003; Cooper 2005); and 4) *Advanced readers* (13-17 years old) are now teens and in Piaget's formal operational stage where symbols associated with abstract concepts are meaningful as teens begin to emerge into adult information seekers (Huitt & Hummel, 2003; Blowers & Bryan, 2004; Dubroy, 2010).

Cai and Zhao (2010) contend that youth store and retrieve information based on their cognitive ability and face two primary information processing deficiencies. Children who are pre-readers or beginning readers around seven years old or younger tend to suffer from meditational deficiencies and are considered *limited processors*, which reflect this age group's inability to use effective information storage and retrieval strategies. Youth that are intermediate readers around 7-12 years old tend to suffer from production deficiencies and are considered *cued processors* who are able to begin using more effective storage and retrieval strategies when they have cues guiding them. Youth older than 12 or 13 years old tend to be advanced readers and outgrow these cognitive deficiencies and are referred to as *strategic processors* (Cai & Zhao, 2010), which reflects adult information seeking tendencies.

Pre-adolescent web information seekers (10-13 years old) prefer visual cues over dense text and their information seeking behavior focuses more on exploring than strategic searching for clearly defined information goals; sites that keep this age-group's attention use bright colors and are visually appealing with common use of animation, sound, and visual graphics and icons (Large, Beheshti, & Rahman, 2002; Nielsen, 2005). This age group does not like to scroll, prefers to browse over using search engines, and becomes quickly frustrated with lack of success (Large, Beheshti, Nessel, & Bowler, 2006).

Adolescent web information seekers (14-18 years old) still prefer to browse rather than conduct specific key word searches (Large, Beheshti, Clement, Tabatabae, & Yin Tarn, 2009). They like sites that have "cool" graphics and are interactive, where they can socialize with others and leave their mark through online quizzes, voting, blogging, and games (Nielsen, 2005; DiMichele, 2007). As this age group has begun to more closely reflect adult information seeking behavior, teens like to scan pages quickly looking for visual cues that allow them to quickly determine whether the site is usable for them – relevant with high quality information (Fidel et al, 1999). Like adults, most teens find moving images, sounds, and other scrolling information "distracting" and tend to ignore them with some disdain (Nielsen, 2005; DiMichele, 2007).

Prensky (2008) coined youth born with digital access to computing and the Internet *digital natives*, while older generations represent *digital immigrants*. Too often teachers make the mistake of assuming that being a digital native is synonymous with information seeking expertise because, "their extensive use of ICT often creates a false sense of competency, as well as the misperception among many adults that contemporary youth are 'media savvy'" (Considine & Horton, 2009, p.472). Often adult web designers create sites largely intended for youth with adult users in mind (Chow, 2011; Chow, Smith, & Sun, 2012; Lin, 2007). Design goals for youth such as "cool," "engaging," and "age-appropriate" defined using an adult-centered paradigm are usually off target. Chow, Smith, and Sun (2012) referred to the process of more accurately operationalizing youth ideas and meaning into youth-oriented websites as *concept actualization*. A growing body of research suggests working with youth throughout the lifecycle of a website (Druin, 1999; Large et al., 2006; Harding et al., 2009) – analysis, design, development, implementation, and evaluation – is the appropriate way to ensure youth perspectives and priorities are included.

A thorough review of the literature suggests there are three domains to consider when designing websites for youth – cognitive, affective, and design. Taking account that the *cognitive domain* reflects age-appropriateness for youth entails seven primary factors: 1. Amount of text on a page (Bilal, 2005), 2. Vocabulary (Cooper, 2005; Dubroy, 2010), 3. Graphics (Large, Beheshti, & Rahman, 2002), 4. Cues (Rose, Rose, and Blodgett, 2009), 5. Pictorial searching (Rose, Rose, and Blodgett, 2009), 6. Icons to represent ideas (Cooper, 2005; Dubroy, 2010), and 7. Games (Nielsen, 2000).

The *affective domain* involves ensuring an emotionally safe environment (Bilal, 2005; Kuhlthau, 1991) that minimizes uncertainty and fear of failure by providing feedback and using clear organization (Bilal, 2005). Establishing a positive affective environment for youth on the Web involves seven factors: 1. Images that youth can relate to and are comforted by (Cooper, 2005), 2. Sounds that provide feedback and reflect interaction (Cooper, 2005), 3. Interactivity with others (Teo, Oh, & Lui, 2003; Bilal, 2005; Dubroy, 2010), 4. Personalization (Large,

Beheshti and Rahman, 2002; Dubroy 2010), 5. Play (Dubroy, 2010; Large et al., 2002; Cooper, 2005), 6. Open exploration (Bilal, 2005), and 7. Self-paced (Cooper, 2005).

The *design domain* involves actually incorporating identified best practices that help make a website an inviting, age-appropriate digital environment designed to maximize interest and present information that youth can effectively search and engage with. The four primary design factors to account for are: 1. A child-centered, youth-oriented approach (Druin, 1999; Bilal, 2002; Large, Beheshti, & Rahman, 2002; Large, Beheshti, Nasset, & Bowler, 2004), 2. Allow youth to control the pace and create their own, unique paths (Cooper, 2005), 3. Ability to leave a footprint (Bauman, 2009; Large et al., 2002; Dubroy, 2010), and 4. Simple layouts (Cooper, 2005; Nielson, 2002). Youth-oriented design layouts include - Bright colors (Bilal & Kirby, 2002; Bilal, 2005; Dubroy, 2010; Large, Beheshti, & Rahman, 2002; Large, Beheshti, Nasset, & Bowler, 2004), site mascots (Bowler, 2004), creative icons (Bowler, 2004; Large et al., 2004), a fun name (Large, Nasset, Beheshti and Bowler 2004), animation and graphics (Bowler, 2004; Large et al., 2002; Dubroy, 2010; Large et al., 2004; Nielsen, 2002), characterization (Bowler, 2004), a logo in upper left corner (Nielsen, 2004; Nielsen, 2010), a homepage search box with keyword searching (Nielsen, 2004), no splash page (Nielsen, 2004; Nielsen, 2010), and horizontal breadcrumbs (if used) (Nielsen, 2004; Nielsen, 2010).

Chow, Smith, and Sun (2012) utilized these three domains as a checklist to create age-appropriate websites for middle school and high school youth as part of the NSF funded STARS Alliance focused on broadening participation in computing and information technology. Working with youth design partners, the middle school site, see Figure 1, was defined by bright colors in the background and foreground, smiling faces, sound effects, animation, and access to online games and fun quizzes. The high school design, see Figure 2, was slightly less colorful based on high school student feedback and focused more on social communication (blogs and polls), careers, answering more specific questions such as types of jobs and salaries, and sharing real stories.



**Figure 1 - Middle School Website**  
([www.uncg.edu/MSZ](http://www.uncg.edu/MSZ))



**Figure 2 - High School Website**  
([www.uncg.edu/HSZ](http://www.uncg.edu/HSZ))

Since the knowledge base of how to effectively develop youth websites continues to mature and evolve, our study sought to explore how well school library websites were incorporating these findings. We have been unable to find any other studies in the literature examining this question. Initially this study began as a funded summer project at a university in the southeastern United States and evolved into a nationwide study that sought to answer four central research questions: 1) What does a typical school library website look like? 2) Who are school library websites designed for? 3) How do school library websites compare to recommended best practices? and, 4) How usable are school library websites?

## Method

### Sampling and Participants

Sampling involved seeking a representative sample through random selection of school districts from one rural and one urban county across the United States and then random selection of one elementary, middle, and high schools in each of these selected districts.

*Sampling.* In order to ensure a representative sample of school libraries to evaluate, one rural (a population of less than 50,000) and one urban county (a population greater than 50,000) (US Census Bureau, 2010) from every state was first randomly selected from the US Census Bureau website. From each of these selected counties, one elementary, middle, and high school was randomly selected for evaluation by identifying them through each district's website.

*Participants.* A total of six school library websites were selected in each of the 50 states (three from a rural county and three from a urban county) in the United States (n=300) and total of 269 school websites (37% elementary, 38% middle, and 38% high school) have been evaluated using the School Website Checklist to date. In addition, each of the school libraries selected were sent an online survey and 57 school librarians (33% elementary, 39% middle, and 63% high school) responded, which represents a 21% response rate.

### Instrumentation

The study utilized two instruments for the study – a school website checklist and a school library survey.

*School Website Checklist.* This is a 38-item online checklist for the study derived from the literature.. The checklist was organized into seven areas - site information, cognitive elements, affective elements, design, feature placement, content, and site ratings. See Appendix A.

*School Librarian Survey.* This survey was comprised of nine-items examining the library's website design and management, as well as the top five information and service priorities of the library. Each school that was randomly selected was emailed an online survey to complete. See Appendix B.

## Results

The majority, or 84% (n=227), of the 269 schools evaluated had a school library website. Overall the sites evaluated based on the checklist criteria appeared to be designed more for adults (50%, n=112) than for youth (13%, n=30), while many also appeared to be geared to both adults and youth (37%, n=83).

### Cognitive Design

In terms of best practices for cognitive design, ratings for youth were extremely low. For example, sites rated low on a 10-point quantitative scale (1=low, 10=high) for use of symbols that represent concrete objects (M=3.4), bright and engaging colors that attract attention and keep the youth interested (M=3.3), well thought-out portal names (M=2.9), creative and significant icons (M=2.6), and animation (M=.79). The two factors that rated highest were age-appropriate graphics and vocabulary (M=5.0) and access to electronic resources including databases, online reference, and e-books (M=4.6).

### Affective Design

The overall ratings for affective design were similarly low. Sites rated low for the opportunity to play and learn (M=3.1), encouraging exploration (by being open-ended) (M=2.3), active designs (M=1.8), user control (M=1.6), allowing for and responding to child input (M=1.4), the ability to leave their footprint on the site (M=.60),

and opportunities for social interaction ( $M=.60$ ). The highest rated factor was reducing cognitive load by limiting distracting information and presenting only the information desired in a prominent, singular fashion ( $M=4.6$ ).

Table 1 lists the mean ratings for all factors evaluated.

**Table 1 - Cognitive, Affective, and Design Ratings for School Library Websites**

<b>Web Factor</b>	<b>Mean Rating</b>
Are graphics and vocabulary age-appropriate?	5.01
Does the site reduce cognitive load by limiting distracting information and presenting only the information desired in a prominent, singular fashion?	4.61
Is there a link to access electronic resources including databases, online reference, and e-books?	4.46
Does the website use symbols related to concrete objects?	3.37
Does the site use bright and engaging colors that attract attention and keep the youth interested?	3.24
Can users enjoy themselves through play and learning?	3.07
Does the site have a well thought-out portal name?	2.92
Are there search tips or instructions for searching?	2.72
Does the site use creative and significant icons?	2.61
Does the website's design encourage exploration (by being open-ended)?	2.28
Does the website balance familiarity with novelty?	1.76
Is the website design active?	1.75
Does the website design emphasize user control?	1.64
Does the site offer quick feedback?	1.64
Does the website allow for and respond to child input?	1.44
Does the site have a URL that's easy to remember?	1.24
Does the site use animation?	0.79
Does the site allow for trial-and-error with physical, not abstract, objects?	0.67
Can users leave their footprint on the site?	0.62
Does the site support social interaction?	0.56
Does the site allow for progressive levels of expertise facilitating competence while offering new challenges?	0.52
Does the website involve multiple senses?	0.44
Does the site use sound effects?	0.19

### **Design: What Does a School Library Website Look Like?**

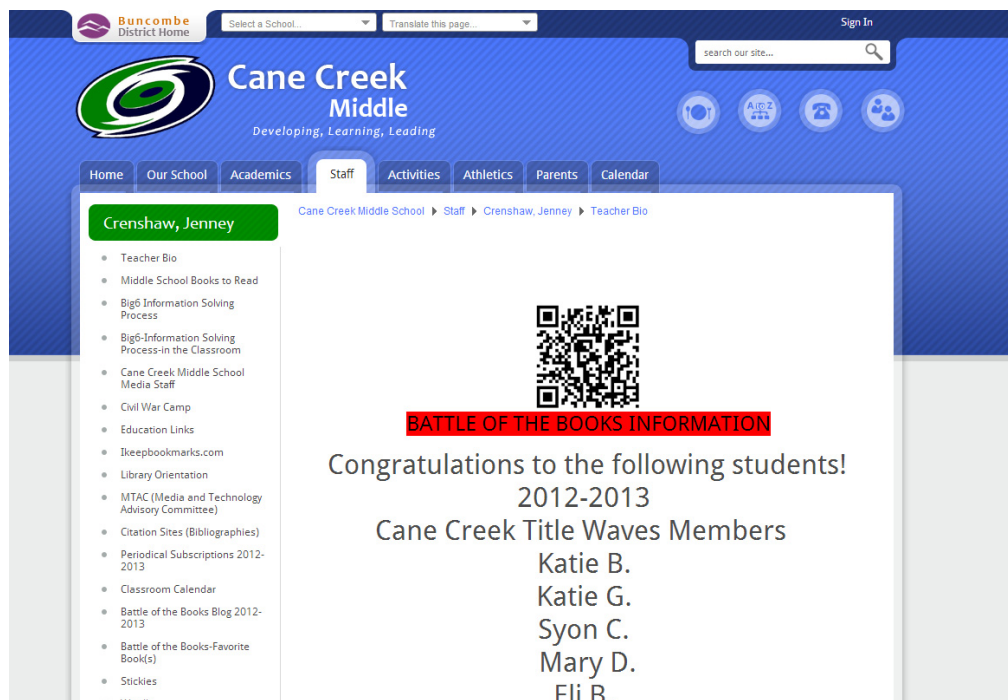
In comparison to best practices, only 1% ( $n=2$ ) were considered top tier (upper 33%), 17% were considered mid-tier (mid 33%), and 81% were considered lower tier (lower 33%). The most common features available were access to databases (76%,  $n=120$ ), access to information literacy resources (77%,  $n=123$ ), library hours (47%,  $n=74$ ), access to an OPAC (62%,  $n=98$ ), book recommendations and reviews (46%,  $n=73$ ), library news and events (45%,  $n=71$ ), library policies (40%,  $n=64$ ), and access to a personal account (39%,  $n=62$ ).

The majority of school library websites have their main navigation located on the left side (66.2%) or top center (52%). In terms of name and logo, 77% have them either located at the top center (43%) or center (34%) of the page header. Some libraries also had their name and logo on the top left (16%) of the page. The majority of school libraries, however, did not have their library contact information on the homepage (60%) while those that did located it on the center (21%) of the page. In terms of library location information and business hours, again the majority of sites (64%) evaluated did not have this information available; those that did had this information placed it at the bottom center (13%) or bottom left (9%) of the page. Table 2 shows the content found on school library websites.

**Table 2 - School Library Website Content and Services**

Content	Response Percent	Response Count
Access information literacy resources	79.7%	177
Access databases	73.0%	162
Access an OPAC	62.2%	138
Find library hours	48.6%	108
Find book recommendations/reviews	44.1%	98
View library news and events	42.8%	95
View library policies (checkout, overdue policies, etc.)	41.0%	91
Access personal account	39.2%	87
View the library	36.9%	82
Receive help with research from a librarian	6.3%	14
Renew library materials	4.1%	9
Sign-up for a class with the librarian	3.6%	8
Reserve a library resource online	3.2%	7
Schedule a classroom	2.7%	6
Reserve technology	1.8%	4
Search for available hardware and software	0.5%	1

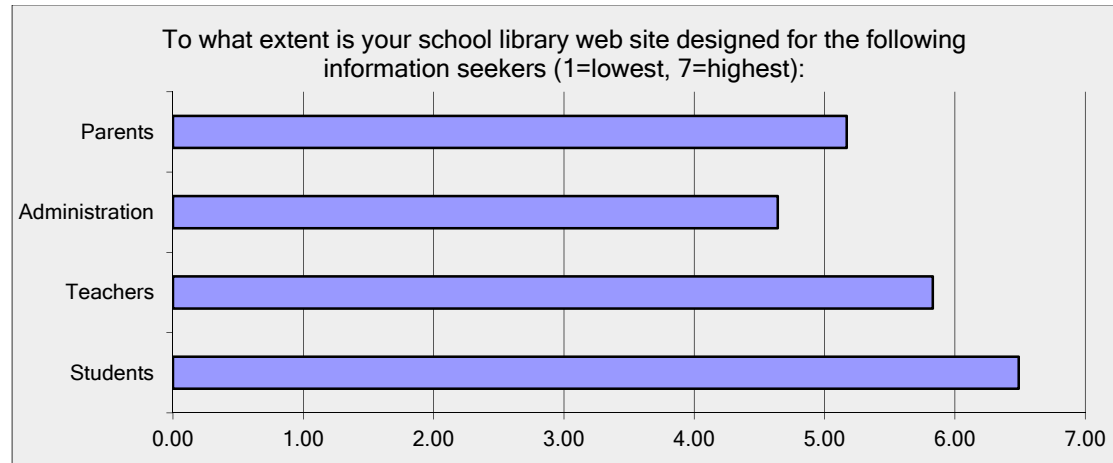
Figure 3 shows an example of one of higher rated school library websites evaluated. The site contained the primary design layout, color scheme, and innovative use of technology that engages youth.



**Figure 3 - Cane Creek Middle School (<http://www.buncombe.k12.nc.us//Domain/387>)**

## School Librarian Perspectives

*Websites designed for students.* For the librarian survey, 89% (n=49) of the respondents said they had a website. Overall, librarians felt their websites, on a scale of 1-7 (1=low, 7=high) were designed mostly for students (M=6.5), teachers (M=5.8), parents (M=5.1), and administration (M=4.7). See Figure 4.



**Figure 4 - Who are School Library Websites Designed for?**

*School library services.* In terms of services, school libraries provided books, journals, and other print materials (100%), online databases (96%), computers or other technologies (94%), instruction and training (92%), areas for studying (89%), meeting spaces (87%), and technology support (85%). See Table 3.

**Table 3 - School Library Services**

Services	Response Percent	Response Count
Books, journals, and other print material	100.0%	47
Online databases	95.7%	45
Computers or other technology	93.6%	44
Instruction or training	91.5%	43
Studying	89.4%	42
Meeting space	87.2%	41
Technology support	85.1%	40
CDs or other media	78.7%	37
Testing	63.8%	30
Socializing	61.7%	29
Access to social media (i.e. MySpace, Facebook, YouTube, etc.)	14.9%	7
Other (please specify)		7
Access to gaming	12.8%	6

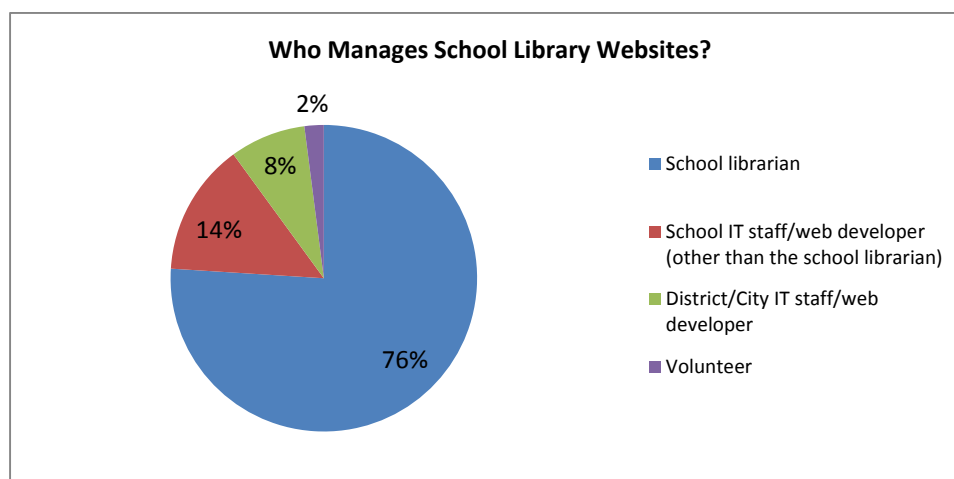
*High priority services.* Overall the main services used by patrons and library priorities were similar. Librarians felt that both their number one goal and the patrons' highest priority goal were books and other print materials (M=1.47 ranking for patron usage). Whereas computers or other technology was the next highest priority

for patrons (M=2.06), librarians felt that instruction or training was their second highest priority. Librarians also held their online databases as a higher priority (M=3.11) than providing a place to study for patrons (M=3.38). See Table 4 for a comparison between what librarians felt were patron goals versus library goals.

**Table 4 - Highest Priority Services for Patrons and Librarians**

School Library Services	Patron Usage	Library Priority	Difference
1. Books, journals, and other print material	1.47	1.67	-0.20
2. Computers or other technology	2.06	2.79	-0.74
3. Instruction or training	3.22	2.39	0.83
4. Studying	3.38	4.11	-0.74
5. Online databases	3.61	3.11	0.49
6. Technology support	3.95	4.21	-0.26
7. Meeting space	4.05	4.22	-0.17

*Librarians manage their own websites.* School librarians are for the most part the site developers (76%) followed by school IT staff (14%) and district IT staff (8%). See Figure 5.



**Figure 5 - Who Manages School Library Websites?**

In general, school librarians felt that they had autonomy to change and update their content and design (M=5.61 out of 7), their website does a good job of serving the information needs of its users (M=5.4), they have adequate resources to maintain their site (M=5.0) and they have the proper training to manage their websites (M=4.7).

## Discussion

Examining a random sample of urban and rural school library websites across the United States complemented by input from librarians has established a picture of what a typical school library website looks like, who it is designed for, how well they compare to best practices recommended by the literature, and how usable they actually are.



### **1) What does a typical school library website look like?**

The study's results suggest that, although there are some common trends, there is really no typical school library website design. There are similarities, however, to an academic or public library website (Chow, Bridges, & Commander, 2012) in terms of navigation elements, as two thirds of the sites evaluated had navigation on the left side of the page or top center of the page and their name and logo at the top left or center of the page. In terms of services, school library websites tended to have access to information literacy resources, databases, and an online public access catalog from their homepage. The majority of school library websites, however, did not have library contact information, location, or business hours on the homepage. Furthermore, access to other expected services was also not found on the majority of websites – library policies, news and events, images of the library, access to personal accounts, ability to renew library materials, or reserve technology or library space for class or testing.

### **2) Who are school library websites designed for?**

Like most websites, school library websites are designed for multiple groups. School librarians felt that their websites were predominately designed to serve students followed by teachers, parents, and administrators, respectively. The major services school libraries offered were access to books, journals, and other print materials, online databases, access to computers and other technology, instruction or training, a place to study, and a meeting space; technology support and testing were also identified as frequent services.

Comparing what librarians felt were the highest priorities for patrons with what patrons felt were the library's highest priorities suggests a high degree of alignment. These primary services also represent a checklist of information that patrons may expect to be included on school library websites. While access to databases and an OPAC were found on the majority of school library websites, information about computers and technology, instruction or training opportunities, technology support, and testing were not commonly found.

### **3) How do school library websites compare to recommended best practices?**

School library websites did not compare favorably to recommended best practices for youth. In terms of cognitive design, only one factor – age-appropriate graphics and vocabulary – rated a mean of 5.0 (on a 10 point scale) followed by providing access to electronic resources. Other major cognitive factors affecting youth information seeking – use of symbols for concrete object, use of bright colors, well thought-out and catchy site names, and use of animation or sounds all rated extremely low. It would appear there are no central goals for school library websites although approximately half served as content providers for resources.

Ratings for affective or emotional design were rated even lower. Such factors as designs that encouraged exploration, allowing for and receiving child input, and social interaction were all rated extremely low. The highest rated factor was reducing cognitive load ( $M=4.6$ ) due to the tendency of many school library sites to serve as information portals.

### **4) How usable are school library websites?**

The usability of school library websites can be viewed from two different perspectives. The first is providing information that is central to the needs of the patrons and the primary goals of library. Librarians identified provision of books and other information and databases as their top priority and over three quarters of the websites independently examined did provide access to this information. The problem, however, is that information about other major library goals were not typically provided on school library websites. This would suggest that the overall relevance and usefulness of school library websites is only focused on providing information to meet one primary library goal – books and other information sources. This is problematic and in contrast with recommended

web design standards that identify prioritization of functionality or what users want from a website as the central focal point of good web design (Nielsen & Loranger, 2006).

The second perspective is to examine school library websites using general best practices as guidelines for how to age-appropriately develop information spaces for youth. School library websites did not compare favorably to either cognitive, affective, or design conventions. The websites appear to be driven by content and although librarians report designing for students it would appear this emphasis is focused more on content than any of these three dimensions. This most likely impacts the usability of school library websites negatively because of the unique needs of youth seeking information on the Web. In addition, other major content areas identified outside of books and traditional information resources that would prove useful for parents, teachers, and administrators are not typically provided at all.

### **Implications and Limitations**

The implications of the study's findings center on taking a broader perspective for effectively providing information on the Web and how websites may help both facilitate and supplement school library services. First, the representativeness of the sample studies based on random sampling, the inclusion of both urban and rural districts, and the perspectives of some of these school librarians helps triangulate the data; it builds both internal and external validity and reliability to the study's findings and conclusions. Second, our findings suggest some commonality of navigation and branding as well as gaps across sites. Third, school librarians helped identify what they see as the primary goals of school libraries and who they are trying to serve through their websites. Lastly, the study provides preliminary design and content guidelines for school library websites that may prove useful nationwide.

The study also has three major limitations. First, the study does not include input from actual school library website users, only school librarians. Feedback from students, teachers, parents, and administrators needs to be collected, which will help determine a respective site's usability and the specific information looked for on a school library website. Second is a low sample size and response rate of school librarians; a larger sample will add validity to the study's findings and conclusions. Lastly, the results are not differentiated by urban and rural or high school, middle school, and elementary school participants at this time. They have only been analyzed in the aggregate. These results will be sorted and analyzed separately for future publication.

Future research will involve reanalyzing the data based on stratifications as well as reaching out to actual school library website users to further triangulate the study's findings.

### **References**

- Bilal, D., & Kirby, J. (2002). Differences and similarities in information seeking: Children and adults as Web users. *Information Processing & Management*, 38(5): 649-670.
- Bowler, L., Nasset, V., Large, A. & Beheshti, J., (2004). Using the Web for Canadian history projects: What will children find? *Canadian Journal of Library and Information Science*. 28(3): 3-24.
- Blowers, H., & Bryan, R. (2004). *Weaving a library Web: A guide to developing children's websites*. Chicago: ALA.
- Buckleitner, W. (2008, May 6). *Like taking candy from a baby: How young children interact with online environments*. Retrieved June 20, 2011, from Consumer Web Watch: <http://consumerwebwatch.org/pdfs/kidsonline.pdf>
- Cai, X., & Zhao, X. (2010). CLICK HERE, KIDS! Online advertising practices on popular websites. *Journal of Children and Media*, 4 (2), 135-154.
- Chow, A. (2011). *School librarians and Web usability: Why would I want to use that?* Association for Educational Communications and Technology Annual Conference Proceedings, November 9-11, Jacksonville, FL.

- Chow, A., Bridges, M., & Commander, P. (2012). The website design and usability of US academic and public libraries: Preliminary guidelines from a nationwide study. *College & Research Libraries* (under submission).
- Chow, A., Smith, K.M., & Sun, K.S. (2012). Youth as design partners – Age-appropriate Web sites for middle and high school students. *Journal of Educational Technology & Society* (in press).
- Considine, D., Horton, J., & Moorman, G. (2009). Teaching and reading the millennial generation through media literacy. *Journal of Adolescent & Adult Literacy* , 52 (6), 471–481.
- Cooper, L. Z. (2005). Developmentally appropriate digital environments for young children. *Library Trends* , 54 (2), 286-302.
- DiMichele, P. (2007, April 23). University of Houston – Prospective student usability testing: Results and recommendations memorandum. Retrieved June 2, 2009, from [http://www.uh.edu/evolvinguh/documents/UH\\_usabilityMemo.pdf](http://www.uh.edu/evolvinguh/documents/UH_usabilityMemo.pdf).
- Druin, A. (2002). The role of children in the design of new technology. *Behaviour & Information Technology*, 21 (1), 1-25.
- Dubroy, M. (2010). Building virtual spaces for children in the digital branch. *The Australian Library Journal*, 211-223.
- Fidel, R., Davies, R. K., Douglass, M. H., Holder, J. K., Hopkins, C. J., Kushner, E. J., Miyagishima, B. K., & Toney, C. D. (1999). A visit to the information mall: Web searching behavior of high school students. *Journal of the American Society for Information Science*, 50(1), 24-37.
- Harding, J., Szakacs, J., & Parry, B. (2009). Children playing and learning in an online environment: A review of previous research and an examination of six current web sites. *Young Consumers* , 10 (1), 17-34.
- Huitt, W., & Hummel, J. (2003). *Piaget's theory of cognitive development*. Retrieved June 13, 2011, from Educational Psychology Interactive: <http://www.edpsycinteractive.org/topics/cogsys/piaget.html>
- Kuhlthau, C. C. (1991). Inside the search process: Information seeking from the user's perspective. *Journal of the American Society for Information Science* , 42 (5), 361-371.
- Large, A., & Beheshti, J. (2005). Interface design, Web portals, and children. *Library Trends* , 54 (2), 318-342.
- Large, A., Beheshti, J., & Rahman, T. (2002). Design criteria for children's Web portals: The users speak out. *Journal of the American Society for Information Science and Technology* , 53 (2), 79-94.
- Large, A., Beheshti, J., Clement, I., Tabatabae, N., & Yin Tarn, M. T. (2009). Visualizing a hierarchical taxonomy in a children's Web portal. *The Canadian Journal of Information and Library Science* , 255-282.
- Lin, C. (2007). Organizational website design as a rhetorical situation. *IEEE Transactions on Professional Communication*, 50, 35-44.
- Milligan, C., & Murdock, M. (1996). Testing with kids & teens at IOMEGA. *Interactions*, 3(5), 51-57.
- Nielsen, J. (2000, January 9). *Is navigation useful?* Jakob Nielsen's Alertbox. Retrieved June 2, 2009, from <http://www.useit.com/alertbox/20000109.html>
- Nielsen, J. (2005, January 31). *Usability of websites for teenagers*. Jakob Nielsen's Alertbox. Retrieved June 2, 2009, from <http://www.useit.com/alertbox/teenagers.html>
- Prensky, M. (2008). *Young minds, fast times: The twenty-first-century digital learner*. Retrieved November 15, 2011, from [www.edutopia.org/ikid-digital-learner-technology-2008](http://www.edutopia.org/ikid-digital-learner-technology-2008)
- Rose, M., Rose, G. M., & Blodgett, J. G. (2009). The effects of interface design and age on children's information processing of Web sites. *Psychology & Marketing* , 26 (1), 1–21.
- Teo, H., Oh, L., Liu C., & Wei, K. (2003). An empirical study of the effects of interactivity on web user attitude. *International Journal of Human-Computer Studies*, 58 (3), 281-305
- US Census Bureau. 2010 Census Urban and Rural Classification and Urban Area Criteria. Retrieved on October 21, 2012 from <http://www.census.gov/geo/www/ua/2010urbanruralclass.html>

## **Appendix A**

### **School Website Checklist**

## School Website Checklist (2)

### \*1. What is the Name of the School/Institution?

### \*2. What age group does the school/library serve?

- ☐ Elementary
- ☐ Middle School
- ☐ High School

Other (please specify)

### \*3. Does the school have a library website?

- ☐ Yes
- ☐ No

Other (please specify)

### \*4. What is the website's URL?

### \*5. What is the name of the website?

### \*6. Contact information for librarian

Name:

Email Address:

## School Website Checklist (2)

### Cognitive

#### \*7. Does the website use symbols related to concrete objects?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

#### \*8. Does the site allow for trial-and-error with physical, not abstract, objects?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

**\*9. Does the site use bright and engaging colors that attract attention and keep the youth interested?**

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

**\*10. Are graphics and vocabulary age-appropriate?**

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

**\*11. Does the site use animation?**

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### \*12. Does the site use sound effects?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*13. Does the site use creative and significant icons?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*14. Does the site have a URL that's easy to remember?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments



## School Website Checklist (2)

### \*15. Does the site have a well thought-out portal name?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*16. Does the site include a link to the OPAC?

- ☐ Yes
- ☐ No

Comments

### \*17. Is there a link to access electronic resources including databases, online reference, and e-books?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### \*18. Are there search tips or instructions for searching?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*19. Does the site include library contact details (general phone and email)?

- ☐ Yes
- ☐ No

Comments

## School Website Checklist (2)

### Affective

**\*20. Does the site reduce cognitive load by limiting distracting information and presenting only the information desired in a prominent, singular fashion?**

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

**\*21. Can users enjoy themselves through play and learning?**

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### \*22. Can users leave their footprint on the site?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### Design

#### \*23. Does the website design emphasize user control?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

#### \*24. Does the website's design encourage exploration (by being open-ended)?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### \*25. Is the website design active?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*26. Does the website involve multiple senses?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*27. Does the site offer quick feedback?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### \*28. Does the website balance familiarity with novelty?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*29. Does the website allow for and respond to child input?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*30. Does the site allow for progressive levels of expertise facilitating competence while offering new challenges?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

## School Website Checklist (2)

### \*31. Does the site support social interaction?

	0	1 (Lowest)	2	3	4	5	6	7	8	9	10 (Highest)	N/A
High or Low?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

### \*32. In your opinion, this site should be considered a:

- ☐ Top Tier youth website (upper 33%)
- ☐ Mid Tier youth website (mid 33%)
- ☐ Lower Tier youth website (lower 33%)

Please elaborate

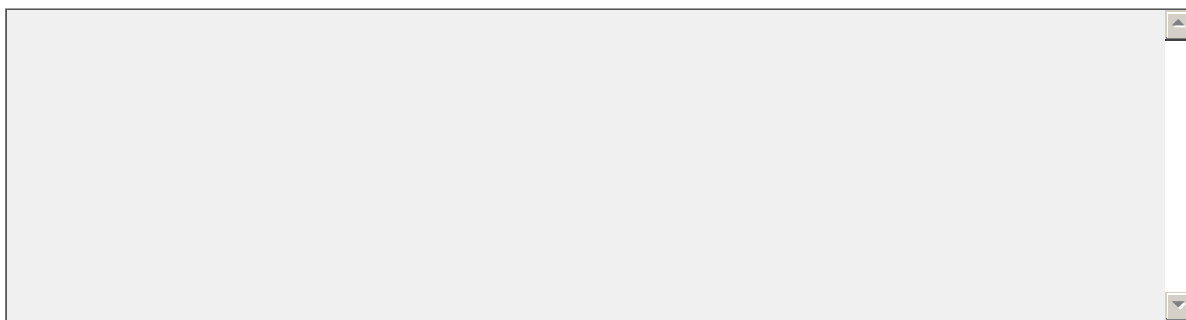


## School Website Checklist (2)

### 33. On this site are you able to:

- ☐ Access an OPAC
- ☐ Reserve a library resource online
- ☐ Schedule a classroom
- ☐ Sign-up for a class with the librarian
- ☐ Reserve technology
- ☐ Access databases
- ☐ Access information literacy resources
- ☐ Access personal account
- ☐ Renew library materials
- ☐ Search for available hardware and software
- ☐ View the library
- ☐ Find library hours
- ☐ View library policies (checkout, overdue policies, etc.)
- ☐ View library news and events
- ☐ Find book recommendations/reviews
- ☐ Receive help with research from a librarian
- ☐ None

Other (please specify)



## School Website Checklist (2)

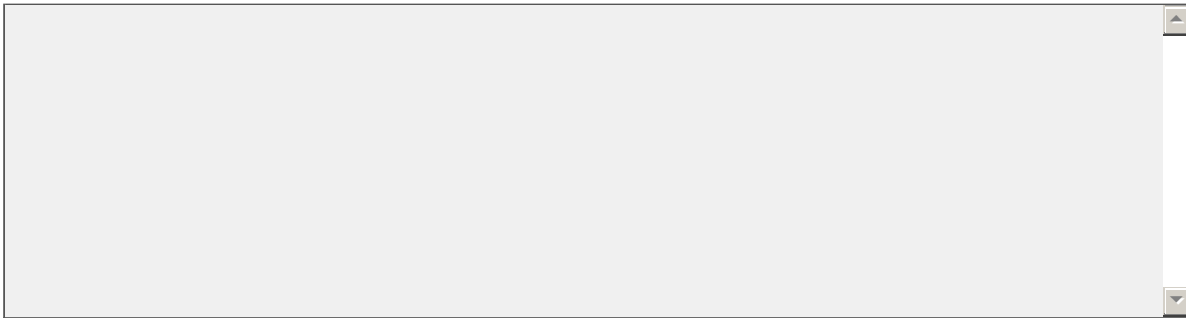
**34. Based on your analysis, is this site designed more for adult or youth information seekers?**

☐ Adults

☐ Youth

☐ Both

Other (please specify)



## School Website Checklist (2)

### Location Information

#### 35. Where are the main navigational tools located?

- ☐ Top Left
- ☐ Top Center
- ☐ Top Right
- ☐ Side Left
- ☐ Center
- ☐ Side Right
- ☐ Bottom Left
- ☐ Bottom Center
- ☐ Bottom Right
- ☐ Not on Homepage

#### 36. Where on the homepage is the library name and logo located?

- ☐ Top Left
- ☐ Top Center
- ☐ Top Right
- ☐ Side Left
- ☐ Center
- ☐ Side Right
- ☐ Bottom Left
- ☐ Bottom Center
- ☐ Bottom Right
- ☐ Not on Homepage

## School Website Checklist (2)

### 37. Where on the homepage are the library contact details (phone number and email)?

- ☐ Top Left
- ☐ Top Center
- ☐ Top Right
- ☐ Side Left
- ☐ Center
- ☐ Side Right
- ☐ Bottom Left
- ☐ Bottom Center
- ☐ Bottom Right
- ☐ Not on Homepage

### 38. Where on the homepage is the library location information (address, directions, etc)?

- ☐ Top Left
- ☐ Top Center
- ☐ Top Right
- ☐ Side Left
- ☐ Center
- ☐ Side Right
- ☐ Bottom Left
- ☐ Bottom Center
- ☐ Bottom Right
- ☐ Not on Homepage

## **Appendix B**

### **School Librarian Online Survey**

# School Librarian Website Survey

## Consent Form

### **\*1. CONSENT TO ACT AS A HUMAN PARTICIPANT: LONG FORM**

**Project Title: School Library Website Usability**

**Project Director: Anthony Chow, Ph.D.**

**What is the study about?**

**This is a research project examining the overall usability of the nation's school library websites. We are interested both in how well school library websites adhere to recommended best practices espoused by the literature as well as how well school library websites meets the needs of its users.**

**Why are you asking me?**

**We are asking you because you are a school librarian who is able to speak to the school library website.**

**What will you ask me to do if I agree to be in the study?**

**You will be asked to complete a seven question online survey seeking the types of services and resources your library provides and what kind of information your website provides.**

**Are there any audio/video recording?**

**There is no audio/video recording.**

**What are the dangers to me?**

**The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants.**

**If you have any concerns about your rights, how you are being treated or if you have questions, want more information or have suggestions, please contact Eric Allen in the Office of Research Compliance at UNCG at (336) 256-1482 Questions, concerns or complaints about this project or benefits or risks associated with being in this study can be answered by Anthony Chow who may be contacted at (336) 334-3411 or [aschow@uncg.edu](mailto:aschow@uncg.edu).**

## School Librarian Website Survey

**Are there any benefits to me for taking part in this research study?**

**Results of our nationwide study may assist you in refining your website to improve information services for your users.**

**Are there any benefits to society as a result of me taking part in this research?**

**Results of our nationwide study may assist school libraries in refining their websites to improve information services for their users.**

**Will I get paid for being in the study? Will it cost me anything?**

**There are no costs to you or payments made for participating in this study.**

**How will you keep my information confidential?**

**All data will be stored behind server and computer password protection, not collecting or identifying participants by name when data are disseminated. All information obtained in this study is strictly confidential unless disclosure is required by law.**

**Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.**

**What if I want to leave the study?**

**You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state.**

**What about new information/changes in the study?**

**If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.**

**Voluntary Consent by Participant:**

**By signing this consent form you are agreeing that you have read it, or that it has been read to you and you fully understand the contents of this document and are openly willing to consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate, or have the individual specified above as a participant participate, in this study described to you by Anthony Chow.**

☐ Yes, I agree to participate

## School Librarian Website Survey

☐ No, I do not want to participate



## School Librarian Website Survey

### \*2. Does the school have a library website?

☐ Yes

☐ No

Other (please specify)



## School Librarian Website Survey

### \*3. What age group does the school/library serve?

- ☐ Elementary
- ☐ Middle School
- ☐ High School

Other (please specify)

# School Librarian Website Survey

## Design

**4. To what extent is your school library web site designed for the following information seekers (1=lowest, 7=highest):**

	1 (lowest)	2	3	4	5	6	7	N/A
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

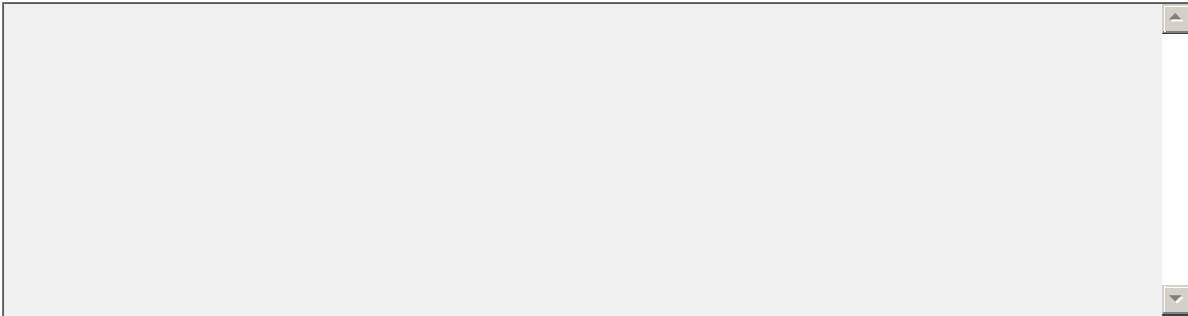
Other (please specify)

## School Librarian Website Survey

### 5. Identify below what services and resources your school library provides:

- ☐ Books, journals, and other print material
- ☐ Instruction or training
- ☐ CDs or other media
- ☐ Access to gaming
- ☐ Access to social media (i.e. MySpace, Facebook, YouTube, etc.)
- ☐ Computers or other technology
- ☐ Testing
- ☐ Studying
- ☐ Socializing
- ☐ Technology support
- ☐ Meeting space
- ☐ Online databases

Other (please specify)



## School Librarian Website Survey

**6. What are, in rank order, the top five school library resources and services (choose only five) for patrons in terms of usage (1=highest, 5=lowest):**

	1 (highest)	2	3	4	5 (lowest)
Books, journals, and other print material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instruction or training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CDs or other media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to gaming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to social media (i.e. MySpace, Facebook, YouTube, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computers or other technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socializing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting space	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online databases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>				

**7. What are, in rank order, your library's top five priorities (regardless of user preferences-1=highest, 5=lowest). Please only choose five:**

	1 (highest)	2	3	4	5 (lowest)
Books, journals, and other print material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instruction or training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CDs or other media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to gaming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to social media (i.e. MySpace, Facebook, YouTube, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computers or other technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socializing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting space	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online databases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>				

# School Librarian Website Survey

## 8. In terms of managing website, who is primarily responsible for designing, developing, and updating content on the site?

- ☐ District/City IT staff/web developer
- ☐ Students
- ☐ School library assistant
- ☐ School librarian
- ☐ Consultant
- ☐ Volunteer
- ☐ School IT staff/web developer (other than the school librarian)

Other (please specify)

## 9. To what extent are the following true for your school library website:

	1 (lowest)	2	3	4	5	6	7 (highest)	N/A
Adequate resources for site maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy to change and update content and design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You are properly trained to manage your website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your school library website serves the information needs of your users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## School Librarian Website Survey

**10. If you would not mind us contacting you to follow up regarding this research topic please leave your contact information below (optional):**

Name:

Email Address: